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GOVERNMENT AID AND DIRECTION IN LAND SETTLEMENT¹

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I wish to present the benefits which would come to this country from the adoption of a definite scheme of land settlement to be carried out through government aid and direction, and to describe some of the methods and policies now in operation in other countries, and needed here to secure the full utilization of our agricultural resources. In doing this I shall deal with the conditions which existed before the war and those likely to exist after the war ends. This explanation is necessary to avoid reference to the temporary prosperity growing out of the present urgent demand for food products.

The adoption of the policy proposed would be a radical departure from the ideas and methods which have prevailed in the past; but that is not an objection: the time has come for a change. This is an entirely different nation from the one which gave 160,000,000 acres of lands to railroads and other corporations, and still larger grants to the states.

The social and economic value of having land owned by its cultivators was not recognized. Its influence on rural civilization was disregarded. These buyers of government, railroad, and state lands did not buy with the idea of becoming farmers or of creating an enduring form of agriculture. They bought simply to sell again at a profit. And so we had the government selling land, the railroads selling land, the private speculator selling land—all seeking colonists and creating an agricultural expansion far beyond the needs of the country. It was no advantage to the nation to entice a farmer away from Connecticut, where he was needed, and place him in the far West, where a surplus of crops made corn a cheaper fuel than coal. The great areas of land thrown on the market caused the social and economic needs of agricultural development to be disregarded. Men who had never farmed, who had no intention of becoming farmers, bought farming land as they bought corner lots in boom towns, not to make a profit from

¹ This paper was prepared as part of the investigation of the land settlement question, as arranged for at the meeting of 1915, but was not read in full at Philadelphia.

its improvement and cultivation but to obtain the unearned increment; to share in the advanced prices which development by others would bring. Settlement became migratory and speculative. Men gave no regard to the future in adopting a kind of cultivation which exhausted the fertility of the soil. When this occurred they went west and repeated the process. The speculative spirit pervaded all classes; clerks, stenographers, miners, people in every vocation, bought land without any investigation into its productive value or any intention of living on it. The result was that land prices have in many cases risen above productive values. This adds to the burdens of the future buyer and cultivator.

Because development has been speculative, because the state has never recognized the responsibility it should have assumed in so shaping the settlement of the public lands as to create an organized rural society at the outset, we have an agriculture wasteful of soil fertility, lacking organization, and especially inefficient in the distribution of what is grown. If the needs of agriculture and the organization of rural society had been understood when the nation was disposing of the public land, the first step would have been its classification, which would have indicated its productive value and the cost of its development. Moreover, some of the land, like the forest land, would have been retained permanently in public ownership, and there should have been such a limitation of tenure as would have prevented the speculative accumulation of great landed estates. The farm unit would have been adjusted to climatic conditions. In some instances it would have been made much larger than the one generally adopted, and in others smaller. Science would have gone hand in hand with the settlement of the arid and semi-arid country, and all that science could give would have been utilized, first in the creation of the conditions of settlement and then in aiding the settler in his difficult task. Because nothing was done, these heroic but uninformed souls were be-deviled by winds, cold, drouth, and insect pests. They wasted their efforts, lost their hopes and ambitions, and a tragic percentage left, impoverished and embittered. The tragic part of this history is that nearly all this suffering and loss could have been avoided under a carefully-thought-out plan of development.

The pictures of rural New England life in Mrs. Wharton's *Summer*, the portrayal of the struggles of western pioneers in Hamlin Garland's *Son of the Middle Border*, the conditions of tenants and settlers in the West and Southwest described in the

Report of the Commission on Industrial Relations, *Farm Leases in Iowa*, and the Report of the California Commission on Colonization and Rural Credits, show that there is need of doing something to make farm life more attractive, to create broader opportunities for poor men to buy farms; and that the continued increase of nonresident ownership of land and its cultivation by tenants must be checked if this country is to avoid an agrarian revolution.

With the disappearance of free land this country entered on a new social and economic era. Free land or cheap land furnished an open road to economic independence. This road has been closed and nothing has been devised to take its place. Privately owned lands have risen rapidly and continuously in price. On an average farming lands in the United States sell for nearly three times as much as in the opening years of the century.

Men of small capital are finding it increasingly difficult to become farm owners. The number who attempt it is decreasing; and the years required to pay for a farm out of the products of the soil have been doubled and quadrupled. As a result American agriculture is breaking down. Its currents are setting in the wrong direction. Well-to-do farmers are flocking to the cities and their children go with them. In the most fertile sections of the country there are scores of counties with less people now than they had ten years ago. There is a disquieting increase in the percentage of land owned by nonresidents. Farm tenantry is coming to be accepted not as a step towards farm ownership but as a permanent condition, and the position of the American tenant is less satisfactory than that of his European counterpart, because neither law nor custom throws around him the safeguards which are found in most countries where tenantry is a permanent feature of rural life.

The American farm laborer is disappearing. In many sections he is being discriminated against because he is too independent. Landowners are seeking men with low standards of living but familiar with hard bodily toil. "What we want," declared a recent conference, "is farm labor weak in the head but strong in the knees," and this want is being filled by recruits from Asia or the Balkan Peninsula, who may be good laborers but who do not contribute to the political or social strength of the nation. Immediate corrective action should be taken to prevent the extension of this. American rural life can not retain its hopefulness and independence if it is to become a great pool wherein are dumped

people who labor without ambition; without any agreement as to the standards of life, or any interest in our political institutions.

In too many of the newer rural districts of America there is less social progress than in some of the older European countries. We are doing less than they to enable people who have industry and thrift, and but little else, to buy and improve farms. The importance of this can hardly be overestimated. The experience of the world indicates clearly that the best farms, the most contented people, and the most stable political conditions are found where farmers own the houses they live in and the land they cultivate. Those who realize the full significance of these facts believe that our indifferent attitude toward the social problems of the farm must be abandoned and that in order to hold young people on the farms we must plan a rural development which will provide economic, intellectual, and social opportunities at least equal to those of other countries.

The economic foundation of this planned rural development is the ownership of the land by those who cultivate it. Only those who live under their own vine and fig tree realize the full value of rural life. The most satisfactory social progress and the greatest advances in agriculture are found where patriotism has its roots in the soil. Several of the leading countries of the world have realized this fact. In order to check political unrest, to lessen the economic loss by migration to other countries and lessen the movement from the country into the cities, Denmark, Ireland, New Zealand, the Australian Commonwealth, Germany, and, to a lesser degree, a number of other countries, have inaugurated a plan of rural development in which the land is bought in large areas, subdivided into farms and farm laborers' allotments, and then sold to actual settlers, on long-time payments. The buyers are aided in improving and cultivating these farms by a competent organization, adequately financed by the government. They are given the benefit of expert advice, not only in their agricultural operations but in forming buying and selling organizations. In other words, these countries are creating an organized community development.

This plan of rural development is the greatest agrarian reform of the last century. It is enabling discontented tenantry and poor laborers to enjoy landed independence, to live in better houses, to have more and better live stock, to educate their children and to have a deeper love for their country for what it is doing for them. A new and better civilization is being born.

The adoption of this policy by the United States will not, therefore, be an experiment. It has been a financial and economic success in the thickly populated countries of Europe and in the sparsely populated countries of Australia and New Zealand. The need for it in the United States is far more acute than this optimistic nation realizes. In the ten years before the beginning of the present war 900,000 people left the United States to take farms in Canada. They took with them millions of capital and an energy, ability, and experience that we can not afford to lose. In the year preceding the war one of the Brazilian states had 1600 applications for farms from the single city of San Francisco. In the stress of this war the Commonwealth of Australia has appropriated \$100,000,000 to be spent in buying and subdividing land and making farms ready for cultivation for the returning soldiers. England is preparing homes for the Empire's returning soldiers. Germany has a complete set of plans for the agricultural development of Poland. Our young men will return home filled with enterprise, looking at the world in a new way; and unless we make provision in advance for enabling them to enjoy landed independence without undergoing the privation, the hardship, and anxiety involved in the purchase of land under the conditions imposed by private colonization agencies, they will not remain here. They will embrace the broader opportunities afforded by the state-aided and directed development of other countries.

The most important land settlement bill thus far considered by Congress is the National Colonization Bill, introduced in the last Congress by Hon. Robert Crosser of Ohio.¹ It provides a revolving fund of \$50,000,000 to be administered by a National Colonizing Board made up of the Secretaries of Labor, Interior, and Agriculture. The Secretary of Labor is to be its president. This board is authorized to expend the fund in purchasing land and in preparing it for settlement. The land acquired would be subdivided into farm units of varying sizes each of which would be large enough to afford a living for a family. Roads and drains would be built before settlement and, if deemed expedient, houses and barns would be erected so that farmers could begin without delay to cultivate their fields. If the land were arid, irrigation works would be built and the surface prepared for the application of water. The powers and the duties of this board would not end with material improvements. The board has authority for de-

¹ H. R. No. 11329, 64th Cong., 1st Session.

veloping and supplying timber, coal, power, telephone, and other services to settlers; for organizing facilities for purchasing, marketing, and other coöperative activities; and for securing any other improvements or services necessary for the efficient organization and development of any colony established under this act.

Under this act the land will forever remain the property of the United States; instead of a freehold title the settler will be given a perpetual right to use. When his use ceases his right to control the land will cease and the land will revert to the government and become available for some other cultivator. Nonresident ownership and tenant farming, in the ordinary sense of the term, would be impossible. The passage of this bill would make it possible for hundreds of people to own farms who could not hope to do so under the ordinary conditions of private sale and private credit. The anxieties and tragical percentage of failures that have accompanied development in the past would be eliminated. All this would be possible without it becoming a charitable measure, or imposing any burden on the taxpayer. Every settler buying land under this bill would be expected to repay all the money advanced in buying a farm, or providing equipment, with 4 per cent interest on deferred payments; and with the business management that has attended similar undertakings in other countries this could easily be done.

California Leads State Legislation

In the past there have been isolated efforts to create rural communities of a definite character. But such settlements as the Greeley Colony in Colorado and those of the Mormon Church in different western states were based on some social or religious idea rather than on the conception that land settlement is a public matter and should be under public direction. California is the first American state to attempt to create a rural life in accordance with carefully-thought-out, prearranged plans.

The reasons for this movement in California are well expressed in the opening paragraphs of the recently enacted land settlement bill:

The legislature believes that land settlement is a problem of great importance to the welfare of all the people of the state of California and for that reason through this particular act endeavors to improve the general economic and social conditions of agricultural settlers within the state and of the people of the state in general.

With the object of promoting closer agricultural settlement, assist-

ing deserving and qualified persons to acquire small improved farms, providing homes for farm laborers, increasing opportunities under the federal farm loan act, and demonstrating the value of adequate capital and organized direction in subdividing and preparing agricultural land for settlement, there is hereby created a state land settlement board, etc.

Under this bill a non-salaried commission is authorized to buy 10,000 acres of land and to subdivide it into farms suited to the agriculture of the district where the land is located and to the varying needs of settlers.

Before the land is thrown open to settlement, roads will be built, irrigable lands will be prepared for the application of water, and a portion of the land will be seeded to crops.

A centralized business management will give to settlers the benefits derived from buying in large quantities and carrying out preparatory work under skilled direction. Instead of an unorganized individual development there will be an organized community development. Settlers will be given information and advice about the expenses they must meet before they are in a position to earn a living income from their farms. This will prevent uninformed homeseekers from wasting their time and money by entering on an undertaking which they can not carry out.

The farms will be sold only to actual settlers who do not own farms elsewhere. Each applicant must show evidence of character and experience, and must satisfy the board of his ability to cultivate and pay for the farm applied for. The aim is to create opportunities which will enable settlers to start with about one-third of the capital that would be needed if they acted as unaided individuals buying under the conditions usually imposed by private colonizing agencies. Settlers without capital will not be accepted. The amount of capital stipulated will not be more than any energetic, thrifty man ought to be able to accumulate in a reasonable time. Fifteen hundred dollars will probably be the minimum. Payments on land will be amortized and can, if it is desired, be extended over a period of forty years. The interest on deferred payments will be 5 per cent, which is far less than settlers have been paying.

Settlers will be encouraged to adopt a kind of farming which will, first of all, maintain soil fertility. The land will be suited to mixed farming; to rotation of crops, with the raising of live stock as a conspicuous feature. It is hoped that the settlers will

adopt one breed of cattle, one breed of hogs, and one of sheep. If this is done each will be advised to get one or two pure-bred females. The board will buy for the community the pure-bred stock. Most of the animals at first will be graded, but settlers will find out the value of pure-bred stock as they are learning how to handle it.

The interest the board is taking in making this settlement a center for fine stock is based in part on the increased profits it will bring to settlers and in part on the fact that it makes farming more interesting. It makes farmers and farmers' children students of their calling. This, in turn, makes them more industrious and contented.

Under the act, speculation in land as a feature of colonization will be eliminated. The land will be bought and subdivided, without profit, the purpose being to build up thrifty, progressive communities, and to make it possible for young men to marry and enter on the cultivation of farms which from the outset they control and which industry and thrift will enable them to own.

In no particular is there greater need of change in American rural life than in the present position and treatment of the American farm laborer. The American farm of the future has special need for intelligent, dependable, trained men, who are willing to work for wages. They are as essential to the success of agriculture as are our farm owners. Furthermore, unless American democracy is a sham there is the same need for insuring that the family of the farm laborer shall live a comfortable, independent life, with opportunities for education and intellectual development, as there is for insuring these advantages to the farm owner. It was not necessary during the era of free land to pay much attention to this matter. Good laborers remained on farms until they could save money to become owners. They were recognized as the social equal of farm owners. But these conditions are gone. The American farm laborer now lives, as a rule, in a bunk-house; he has no social status, and competes with the Asiatic and the peon and degenerates into a hobo. If he is married it is rare that a home is provided close to his employment, and he is usually separated from his family for long intervals, which is bad for the family, bad for the laborer, and bad for society.

The result is that the intelligent and aspiring American who can not afford to own land is leaving the country and going to the city; and the social conditions of the farm are suffering. What

is taking place is well described in the Report of the Commission on Immigration and Housing in California:

The discrimination and oppressive exploitation of this particular class of labor by the employers is resulting in the elimination of whites in this industry. The unequal warfare against such conditions is gradually overwhelming the American or white migratory laborer. The statements of nearly all employers show a deep-seated prejudice against whites as employees. Great numbers of men unable to obtain work or to live under the wretched conditions imposed by employers become hoboes, and, when in the centers of population, hang around the low sections. In . . . as in other places the Japanese and Hindu colonies are becoming larger, with the result that the communities become affected, through the introduction of these aliens, with their particular form of living and civilization.

The California Land Settlement law will change these conditions in communities it creates. The farm laborer will be able to buy a home, which will include two acres of land and a comfortable, sanitary cottage. The initial payment required will be small, and the following payments will extend over a period of twenty years. This will enable the laborer to live with his family. He will have a place where he can employ his time profitably when not working for wages. His family will be able to keep a cow, some pigs, and poultry, which, by providing a large part of their food supply, will enable them to live cheaply. The greatest benefit of this innovation is, however, the influence it will exert on the lives and the characters of the farm laborer's wife and children. A home of their own will make them independent. It will create character and self-respect. More than any other influence it will check the tendency to regard farm laborers as social outcasts, and will make it less necessary to import people who are politically undesirable to till our idle fields.

When the land is ready for settlement the farms will be thrown open to inspection for thirty days. At the end of that time the board will consider the relative merits of the applicants. If two or more apply for the same farm, the applicants will present their claims in person and the farm will be granted to the one best equipped to succeed. Preference will be given to married men with families, and to those who have had actual farm experience.

For the first five years all transfers of land will have to be approved by the board, and practically all transfers will have to be so approved until the lands have been paid for.

Plans of different types of houses and barns and of groupings

of farm buildings are being prepared, with the assistance of the division of farm engineering of the State Agricultural College. Applicants for farms or for farm laborers' homes will be given the price at which these houses can be built, and they can have them built by contract under the board's supervision by making a cash payment of one-third the cost, the remainder to be paid in amortized payments extending over twenty years. The dimensions of these houses will be so standardized that material, in a large degree, will be interchangeable. Contracts for houses in groups of from ten to twenty will save time, reduce costs, and expedite construction.

The settlers will be aided in coöperative buying of live stock and farm equipment. They will be able to secure from the board loans amounting to 60 per cent of the value of permanent improvements which they make on their farms. Thus if a settler with his own labor builds a fence, the value of that fence will be determined by the board's agent and he will be able to secure a loan of 60 per cent of its value at 5 per cent interest. In this way it will be far easier for settlers to tide over the heavy initial expenses of the first year or two than it is under unaided or unorganized development.

The act provides for the employment of a farm adviser who will also be a business manager for the board. He will be on the ground observing how settlers cultivate their farms and noting who are industrious and who are idle and unworthy of financial aid. The presence and the influence of this practical guide will save many settlers from mistakes which would be costly. It will enable the board in dealing with settlers to discriminate between those deserving aid and the shiftless who would misuse it. The prompt and summary elimination of the latter is essential because of the demoralizing influence they may exert. Generous aid for the worthy and unsparing exposure of those who seek to abuse the state's interest will have great influence in promoting a spirit of community pride that, as a rule, is lacking in individualistic colonies. It will encourage the formation of an intelligent, coördinated community life, whose object will be not simply to make money, but to realize the best there is in modern civilization. The saving which it will effect in the initial expenses and the gain it will bring in increased returns through arrangements for the sale of products have been so fully proven in other countries that one working example will, it is confidently expected, soon lead to wide extension of this policy in America.

Other States Have Equal Need for State-Directed Settlement

The large number of estates in California varying in size from 5000 to over 500,000 acres makes the acquiring of land for state colonization comparatively simple. Private subdivision is expensive and often unsatisfactory. Public opinion, therefore, supported the action of the state.

The need for such action is, however, no greater in California than it is in Iowa or Illinois. The large percentage of land now cultivated by tenants and the constant increase in that percentage are conditions which everywhere need to be corrected. The correction will be more difficult in the great agricultural states of the Middle West where there are no large unimproved areas awaiting settlement. The problem of the older states is to evolve a plan for financing the purchase of farms for the tenants who now cultivate them, and to make such changes in the laws controlling land tenure as will prevent the spread of tenantry in the future. This must be done or laws must be enacted which will make farm tenantry more satisfactory than at present. If we are to stop the ruinous exhaustion of the soil, there must be longer leases and compensation for improvements made by tenants, including money spent for fertilizers. If we are not to have a debased rural society, there must be public oversight of rent charges to prevent tenants being exploited. The experience of other countries is that it is easier and better to deal with farm tenantry as an evil and seek to abolish it by promoting ownership.

In order to create conditions which will prevent soil impoverishment and a decline in the character of rural life, there must be a radical change from the migratory and speculative spirit which has characterized our settlements in the past. Those who object to the government assuming the responsibility for such a constructive program are inclined to advocate the single tax as a panacea for these rural ills. They argue that it would make land monopoly unprofitable and open up the land to those who desire to use it but who are unable to obtain it. This feeling is growing; there is an undercurrent of resentment at a land policy which enables men to buy land from the state for less than a dollar an acre and hold it without improvement for a few years and then rent it to Asiatics and peasants from Southern Europe for \$10 to \$20 an acre.

If the government is to buy land for subdivision and settlement at its productive value, our tax laws must be reformed. Land should be taxed on the unimproved value. The tax should be pro-

gressive. The larger the estate the higher the rate. The progressive land taxes of the Australian Commonwealth and several states have proven to be successful agents in promoting the subdivision of great estates and their sale in small tracts. This was the main purpose in their enactment. The revenue is incidental, since the tax ceases entirely if the property is subdivided into tracts sufficiently small. A Tasmanian estate worth over £400,000, owned by nonresidents, paid a progressive land tax before subdivision of £20,000. Since subdivision into small orchard farms it has paid nothing. A land tax helps in buying land, but that alone is not enough. To create the agricultural and rural society this Republic needs there must be financial aid and practical direction, and the influences leading to community organization.

State Aid in Settlement Need Not Inflate Land Values

Some objection has been made to state purchase of land for subdivision and settlement, on the ground that it would inflate land prices. It will be only through mismanagement if such results occur. The price at which land has been bought, subdivided, and sold to settlers in Ireland, Denmark, and Australia is far lower than prices at which private subdividers sell land to settlers in America. If land is bought at its productive value, which is the basis of purchase in the countries named, there will be no increase of present American prices. On the other hand, no more effective means of inflating prices could be devised than those we are now following. Swarms of real estate operators flood the country with exaggerated and misleading statements about the profits of small farms. A comparison of the prices paid for land bought by the government for settlement in Germany, Ireland, Australia, and New Zealand, with the prices at which land is sold to settlers by private colonizers in the United States, will convince any one that state direction is a conservative influence.

The California law was the result of a conviction that private colonization is inadequate; that it has not created and it will not create the kind of rural life this nation needs. There may be isolated instances of colonizers who make the prosperity of settlers the first consideration, but the great majority are concerned with immediate profits. The land is usually sold by agents interested only in the commissions the settler brings. In most cases private colonizers make the time of payment for farms too short, require too large an initial payment, and give too little attention to the settler's capital aptitude.

The testimony of nearly one thousand settlers living in a large number of colonies showed that not one of them had been able to complete his payments within the time fixed in the contract.² The percentage of those who failed utterly showed an amount of hardship, human suffering, and economic waste which makes it unwise to continue to depend on private colonization.

In land settlement carried on as a public matter, profits from land sales are made secondary to rural progress. If it can be carried on without being a burden on the public treasury there is no reason for limiting its operations. Convincing is the testimony of one of the countries which has gone furthest in this direction and whose laws and methods are largely copied in the California statute.

A recent report of the Minister of Lands of Victoria, Australia, stated that the majority of their settlers had a very small capital, averaging the first five years less than \$1500. Yet only about 15 per cent had been unable to meet their obligations. This is a smaller percentage of failure than he has been able to discover in the history of the settlement of any other country. In dealing with the same subject in 1914, the Premier said:

The final success of this investment depends on the returns which can be obtained, and in this respect the state stands in an entirely different position from that occupied five years ago when it made intense culture, combined with closer settlement, the basis of future development. Then it was an experiment, the success of which was doubted by many; now it is a demonstrated success. Over large areas in widely separated districts more than ten times as many families are settled comfortably, under attractive social conditions, as were there five years ago, and they are obtaining returns from their holdings that even less than five years ago were regarded as impossible. The demonstration that families can be fully employed and obtain a comfortable living on from twenty to forty acres of irrigable land not only insures the financial success of our investment in irrigation works, but gives a new conception of the ultimate population which this state will support and the agricultural wealth which it will produce.³

Land Settlement on Reclamation Projects

The most promising fields for inaugurating a carefully-thought-out scheme of land settlement under government direction are the irrigable areas to be reclaimed under the Reclamation Act. This act was passed in 1902. It set aside the proceeds from the sale of public lands as a fund for the construction of irrigation works. These works are to be sold to settlers or owners of land

² Report on Land Colonization and Rural Credits in California, pp. 34-48.

³ *Parliamentary Debates*, 1914.

irrigated. The settlers are to repay the government in twenty years, with no interest on deferred payments. As the works are to be sold at actual cost, the donation of interest makes the terms most liberal.

Under this act over \$100,000,000 have been expended in building canals and reservoirs under the direction of the Reclamation Service, a bureau of the Department of the Interior. The character of these works reflects great credit on those in control. They have been well and substantially built; many of them are in the forefront of this class of engineering achievements. The men in charge have shown a devotion to their work, ability, patience, and honesty which indicate that the government can do this sort of work efficiently and cheaply, and in many respects can get better results than can private enterprise. The interposition of the government has enabled lands to be reclaimed which otherwise would have remained arid. It has built up prosperous settlements in sections which, without such government action, would still be deserts.

There is so much that is admirable in the Reclamation Act and in the manner in which its engineering and operative features have been carried out that one is reluctant to call attention to its vital defects. But the part which is good only emphasizes the part which is hopelessly bad.

The engineering requirements of the Reclamation Act were carefully thought out; the agricultural and economic needs of settlers were ignored. The things needed to create values in land were provided; the safeguards which would insure those values going to the right people were overlooked. To make public land ready for cultivation on these projects, will cost on an average \$100 an acre, and, with the payment for water right included, will cost \$150 an acre. The following estimate is regarded as a fair average for an 80-acre farm:

Leveling land, building checks and small ditches..	\$2,500
House and barn	1,500
Work team and tools.....	1,000
Living expenses—one year.....	500
Taxes, operation, and maintenance charges and incidentals	300
Initial payment on water right.....	200
Dairy herd of 20 cows, or other live stock to eat fodder crops	2,000
Water right (in 20 payments).....	4,000
Total	<hr/> \$12,000

To put from 40 to 80 acres in condition for cultivation will require from \$4000 to \$8000 in cash, or an opportunity to borrow this much money on reasonable terms. In either case, before the land is opened to settlement, estimates ought to be made by those in authority of the probable cost of improving and equipping a farm and of the minimum capital which the settler must have. Not to do this is to encourage a gambling spirit and to lead over-sanguine men to enter on an undertaking that is almost certain to fail.

Some selective discretion ought to be used in selling farms on which thousands of dollars have been spent to provide water. Land should not be sold to any one not equipped in character and experience to succeed. Land should be sold only to some one who needs it and will live on it and cultivate it. The properly equipped settler is now simply a happy accident, because the Homestead Law under which land is settled provides no safeguards. First come is first served. The applicant may be a tramp, he may be a bank president, or he may be exactly the kind of farmer the situation calls for. The land goes alike to all these. A more happy-go-lucky, irresponsible, unsatisfactory way of disposing of resources and creating a community can not be imagined.

Ten years after the Reclamation Act went into operation, the director of the Reclamation Service made this statement:⁴

Another of the fallacies was in the assumption that as soon as water was provided this was practically the end of necessary expenditures. Little consideration was given to the large cost of leveling, subduing, and cultivating the soil and of providing the fertilizers which are necessary in an arid region.

* * * * *

But perhaps most important of all, it was not anticipated how difficult it would be to secure the right kind of farmers to handle the reclaimed land, and utilize it to advantage. It was assumed that as soon as land was brought under irrigation there would be a rush of men who would immediately cultivate every acre and begin the production of large and valuable crops. On the contrary, experience has shown that this is perhaps the most difficult part of the program—far more so than the building of great structures. Most of the large enterprises, whether built with public or private funds, have been in this respect a disappointment, because of the slowness with which the lands have been actually utilized.

On one western project where 400 settlers are now at work and will probably be able to pay for their farms, 580 have given up

⁴ Annual Report Reclamation Service, 1911-12, pp. 2-3.

and gone away. This percentage of failure is too great. The waste of money, labor, and time ought not to be continued. Under a state-aided and directed settlement, such as the Australian states now provide and as California is beginning to provide, the lands on which 580 settlers have failed would offer great opportunities to actual cultivators. A law should make it certain that land shall be sold only to actual cultivators.

Defects of the Homestead Act

The Homestead Act makes no distinction between good and bad land. While every settler has to pay the same amount of money for a water-right and for maintaining the canals, the benefits derived vary widely. One settler may get a farm worth three or four times as much as another. Some farms are close to towns or railway stations; some are remote. Some have a surface easily prepared for irrigation; on others the surface is so broken or the soil is so poor that the cost of leveling is greater than the value of the land.

The Board of Cost Review which investigated conditions on all of the reclamation projects, summed up the need for a reform as follows:⁵

To make no distinction between the good and bad farm units creates great economic unfairness and inequality of opportunity.

It is a serious obstacle to the success of irrigation works. The good farm units are picked up; the culls are left. The aim should be to make all farms equally attractive, and to do this the lands should be classified and prices fixed in accordance with their fertility and cost of preparing for irrigation.

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On several of the projects the taking up of the inferior lands has resulted in the impoverishment of settlers and loss to the reclamation fund. We believe that this result may be avoided by aiding settlers to cure inequality in values and opportunity either by preparing the inferior lands for irrigation or by fixing charges in accord with land values and the relative cost of preparation for irrigation and cropping.

On the North Platte project a majority of the settlers have well-improved farms and are prosperous, but there are strips of broken, sandy country on which only a small part of each settler's farm is under cultivation. On these farms the houses are dilapidated and the farm buildings are falling into disrepair. Preparing the land for irrigation has been costly and the results have been

⁵ Reclamation Record, April, 1917, p. 183.

disappointing. Winds have destroyed crops by blowing the seed out of the ground. Settlers have become so discouraged that, where they have not given up, they are living lives which are a sorry contrast to those of their more prosperous neighbors. Similar inequalities are found on every project. The difference in land is the cause of the difference in results.

The Reclamation Act is an important social and economic measure. Congress has but little to do with this kind of legislation, and its cumbersome organization makes it difficult to formulate the details of economic policies necessary to satisfactory final results. About all that Congress can do is to deal with broad aspects of a problem. Water for irrigation is needed; a law to provide it was passed. The creation of the right kind of agriculture and community life was a different matter, and Congress neglected it. Private investors had assumed that if water were provided the settler would do the rest. Congress accepted this assumption as sound, whereas experience has shown that the private investor was fundamentally wrong.

The Vital Needs of Irrigation Development

The engineering problems can not be ignored nor can the cost of the works; but there are other things of even greater importance. These include the kind of communities which should be created, the best methods of making farms habitable and productive, the minimum capital a settler should have, and what the government can wisely and safely do to aid settlers. Another broad question which has not had the attention it deserves is what agency should direct settlement—the federal government or the state in which the project is located? All these are vital to our future agricultural progress and our ability to compete with other countries. They can be ignored before settlement begins but not afterwards.

The success of every irrigation enterprise depends on the success of the farmer who cultivates the land it waters. Whatever is needed to insure the farmer's success ought to be provided in advance, and because we have not provided it, nearly every large private irrigation project has been a financial failure. Tens of millions of dollars have been lost and thousands of hard-working deserving settlers have been ruined. On government projects development has been slow when it should have been rapid.

These facts warrant a change in our settlement methods. But

there are others equally convincing. We are the only nation building irrigation works which does not give aid and direction to settlers who use them. In Australia, where the government has spent over \$50,000,000, building canals, it has spent over twice that sum aiding settlers. The farmers of Australia are very like those of America; they grow the same kind of crops and speak the same language. Yet in the settlement of irrigated land Australia gives chief attention to things we ignore. It provides millions of dollars for financing settlers. We provide nothing.

Comparison of American and Australian Policies

In order to understand how the two policies operate, let us compare the development of one of the large irrigation projects in Australia with the development of a similar project in America. Let us assume an irrigable area of 150,000 acres subdivided into 2500 farms of 60 acres each. In Australia the first step is the purchase of all the land at its productive value and, if a price can not be agreed upon, then by compulsory purchase at its assessed value plus 12 per cent. While the irrigation works are being built the agriculture of the project is being planned and the lands are being made ready for settlement. A contour survey is made to show where ditches should run and how the surface of land must be smoothed off so that water will run over it evenly. The roads and the towns are located; the farming land is subdivided into farms and farm laborers' allotments. The land is cleared of brush, plowed, leveled, and ditched, and part of it is planted to crops. Plans and estimates of houses varying in cost from \$500 to \$4000 are prepared. Posts and wire for fencing are purchased. A canvass is made of widely separated sections to locate horses and cows which settlers will need. When water is in the ditches, when everything is ready, settlers are invited. They are told that the government will erect any houses they select from its designs if the settler will pay in cash one-third of the cost. He can have the advice of government experts in selecting and buying his live stock. He can, in New South Wales, get his nursery stock from the government nursery. A farm laborer can obtain a house and two acres of land by a cash payment of about one-tenth of the cost of the house.

Farmers must have a minimum capital of from \$1500 to \$2500, the minimum varying with the size of farm applied for. The maximum value of these farms in Victoria, Australia, is \$12,500.

In New South Wales the maximum size is about 200 acres. Settlers are given itemized estimates of cost and not encouraged to undertake the purchase unless they are willing to work hard and constantly for the first two or three years.

Those who get farms find themselves part of a great coöperative undertaking with the government as a backer. There is a farm adviser to tell them what to plant and when to plant it; to help them in buying farm animals and locating markets for their products. The settlement board will lend settlers up to 60 per cent of the value of permanent improvements which they make, and will lend money on their live stock. This money is loaned for twenty years on permanent improvements and for short periods on live stock at from 4 to 5 per cent. The combination of long-time loans and low interest rates with no commissions and, above all, the certainty of being able to borrow money, do much to create hope and confidence and stimulate a family to do its best.

The farm adviser is the balance wheel of this credit scheme. He is with the settlers; he learns who are industrious and practical and who are indolent and visionary. His influence often changes the conduct, if not the character, of those who otherwise would be unsafe personal risks, and his confidential advice keeps the government from making loans, or postponing action where its generosity is being abused.

The governments of the Australian states are creating rural communities with the definite purpose of making them an example of what democracy can achieve. The towns are not makeshift affairs; they are being planned to meet the needs of the future. Areas are set aside for factories, for residences, for trade. There are broad, straight streets for business and winding, cozy, parked streets, for residences. The brains and the talent of the world have been utilized in planning these towns. Mr. Griffin of Chicago planned the two largest towns of the Murrumbidgee scheme in New South Wales. Some of the towns in Victoria projects represent months of study and suggestions from town planners from all parts of the British Empire. In other words, all that the world has learned about making country life convenient, comfortable, and attractive is being utilized in the development of these projects.

And all this is not left to be upset by speculators. The Australian states had seen earlier plans upset by the speculative aggregation of land to which an unlimited freehold title had been

given. Pioneer families had been replaced by sheep. In all the states a repetition of this is guarded against. In New South Wales the settler gets a deed but he does not pay for the land or get an unrestricted freehold. He pays each year a charge which may be considered either a rent or a tax or both. He has complete control of the land, his children inherit it, so long as he or his inheritors live on and cultivate it. If they sell, the purchaser must be approved by the government. If they move away without selling they can not rent; the land reverts to the state.

In Victoria the settler buys the land, pays for it, and gets a freehold title which requires the owner of the land, or a member of his family, to live on and cultivate it. He can not buy other allotments. Land aggregation and tenantry are prohibited as enemies of a democratic civilization.

These settlements have proven such agricultural and economic successes that, in the midst of war, the Australian Commonwealth has appropriated \$100,000,000 to buy and make ready farms for returning soldiers. This, for a population of 5,000,000, is equivalent to an appropriation of \$2,000,000,000 in this country. It has succeeded because the plan is practical. It has been worked out from a business, as well as a humanitarian standpoint. It is sound business because of the money and time it saves settlers. Take the item of houses and barns. Over 5000 of these buildings will be needed on this assumed project—the plans for them are standardized, materials are bought at wholesale, and contracts for their erection are let in large numbers so that builders can keep their men constantly at work. The care given to the designs insures better buildings and better grouping, and the settler pays about half the price he would have to pay if he worked as an unaided individual.

Expert help in buying enables him to get better horses and cows than he otherwise would obtain. A farm prepared to grow crops enables him to make more money in the first two years than he would in five years if he had to level the land.

All the money spent on improvements, loaned to settlers, and paid to advisers has to be repaid with interest. The settler is given from twenty to thirty-six years in which to complete the payments and the interest rate is low—4 per cent on some loans, 5 per cent on others. By means of expert agricultural knowledge, the state's credit in borrowing money, and competent direction in building houses, leveling land, and buying equipment, settlers are

saved anxiety and loss of money and time. The benefits are shown by the statistics which give the small percentage of failures. They can be fully realized only by a visit to these settlements.

Turning from Australia to American development of a similar irrigation project, we find that nothing is planned or provided for but the irrigation works. There are no inquiries into the qualifications of settlers and no limit as to the minimum capital which they must have. Land in private ownership is not acquired, and the announcement of an irrigation work is immediately followed by a rush of speculative buyers. When the actual cultivator comes along he has to pay from two to twenty times the price at which land sold before the works were started. The American settler finds nothing ready but the main canals and the unformed dirt roads. If the land is covered with brush it has to be cleared; the elevations and depressions of the surface have to be smoothed off; the farm unit has to be fenced; a house for the family and a stable for the work animals have to be built; provision for a water supply for household use must be made. Many of the settlers know nothing of irrigation or of meeting the conditions of pioneer life. Very few have the skill or the equipment to prepare land for irrigation.

Instead of plans and estimates for houses and barns and an organization to build them, the American settler must begin by looking for carpenters, for lumber, for hardware, for plasterers, plumbers, painters, and a hundred and one other things which he has neither experience nor aptitude to look for properly. There will be freak houses, lacking durability, sanitation, and comfort, and detracting from the appearance of the district. The time of 2500 settlers which ought to be taken up with plowing and planting will be wasted in doing things that two superintendents of construction in a properly organized office could attend to more effectively.

In one of the American reclamation districts the cost of preparing land for irrigation will be between \$6,000,000 and \$7,000,000 if done by trained men using proper equipment. It will cost more than twice this sum if the settlers have to do it. The settler with inadequate capital is left to finance himself. In most districts the commercial banks have little money to lend. The settler's security is not satisfactory, and he can, as a rule, borrow only on short-time notes at ruinously high rates of interest. These rates vary in different projects from 8 to 18 per cent. In a recent instance the interest paid on a \$2000 loan was 25 per cent.

In the purchase of live stock and equipment these settlers in strange localities, acting without expert advice, are victimized by being sold poor horses and still poorer cows. To leave this costly work to be done by settlers who lack knowledge, equipment, and money, involves a ruinous waste of effort and time. Nothing could be more inefficient. Making land ready for the application of water is as essential a part of reclamation as the building of canals and reservoirs. This is the view of Hon. Franklin K. Lane, Secretary of the Interior, who this year stated before the House Committee on Irrigation:

If I had the installation of the Reclamation Service today I would follow out this scheme as to every acre of land, government and private, on our projects. I would say: "The government will put in the dam; it will put in the main canal; it will level the land; it will seed the land." And then I would divide that land up, and would not allow anybody to go on it except the man who was capable of using it.

This government ought, as a matter of expediency, to make its economic opportunities as broad as those of any other country. To do this the waste, inseparable from unorganized settlement, must be eliminated. The profits of cultivation do not enable settlers to meet their heavy expenses and pay their way. The inevitable result is that they become victims of the money lender.

In 1915, the total mortgage indebtedness on one project was \$3,030,370. Some of the poorer settlers were paying up to 18 per cent interest and the average was over 8 per cent. On another project the total mortgage indebtedness was \$8,500,000, and there were chattel mortgages aggregating \$2,500,000. The rate of interest varied from 6 to 12 per cent, with an average of over 9 per cent. On still another project, the average indebtedness of the settlers was about \$1000. Some settlers owed \$4000 and many of the poorer ones were compelled to pay from 10 to 12 per cent interest. It is not the indebtedness that is significant but the interest rate and the short time for repayment. Few settlers can borrow money for more than one year. The time needed varies from two to twenty years.

A system of credits suited to the conditions of this development should be provided by the government. In Australia, the state of Victoria lends to a settler, on permanent improvements made by him, up to \$2500. New South Wales lends to a settler on the same conditions up to \$4000. The Canadian Pacific Railway lends up to \$2000. The province of British Columbia lends settlers 60

per cent of the estimated value of the land after the improvements have been completed.

What is Needed if Government Construction is to Continue

The full use of western water resources and the cultivation of millions of acres of fertile land await the construction of reservoirs to regulate the flow of streams and to conserve flood waters that now run to waste. The government is the best agency to carry out these works. It can secure the money on more favorable terms than can private enterprise. There is now in the public service a body of highly trained engineers who should be kept employed.

The greater part of the land to be irrigated will, however, be privately owned. Irrigation works to reclaim these lands should be built as commercial undertakings. Not only should the cost be repaid, but interest as well. All the irrigation works of foreign countries are planned to be productive. The British Government receives from 3 to 7 per cent interest on its irrigation investments in India. The Australian States receive, or expect to receive, 4 per cent interest on the cost of canals and 5 per cent interest on all money *loaned* to make improvements or to buy equipment. It is believed that irrigators in America can well afford to pay 4 per cent interest on the money expended in their behalf. If this is done the largest possible extension of government construction will impose no burden on the federal treasury but will result in great gain in national wealth.

Before irrigation service is extended, however, settlement laws need to be reformed. The government should fix the maximum size of a farm unit and acquire privately owned land held in areas larger than that unit. This should be done before the works are built. Roads, towns, and canals should all be planned in advance as part of a unified scheme, and it should be not a merely temporary scheme to be upset by land aggregation as soon as the works are built.

The need for drastic action, both to exclude the speculator and to prevent land aggregation in the future, has been shown in the development of existing projects. The Board of Cost Review in dealing with these evils said:

When the government undertook the reconstruction of the works, the land was all privately owned, except some state land, which has later, unfortunately, and, we think unwisely, been sold by the state of New Mexico in comparatively large tracts to land speculators. This project stands out, therefore, as one in which desirable social and eco-

nomie results of the reclamation act have been defeated by the speculative and nonresident ownership of land and by a selfish and unwarranted inflation in land prices.

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The speculative landholder on our irrigation projects and his allies, the usurer and the real estate commission dealer, as a rule invest no money in improving or cultivating land. They produce nothing and they have no intention to produce anything from the soil. They rely for their profit on the necessities of the settlers and farmers and on the unearned increment due to rise in land values from the mere fact that they were irrigable; from the settlement and increase in value of the neighboring lands, due to the sweat of their neighbor's brows, and from the increase in population and local business and trade. They, unfortunately, may always be found at the head and front of every movement to repudiate under any and every flimsy pretext, and to cut down the actual and proper cost of irrigation works that alone give value to their own and neighbor's lands and is the only basis of prosperity. They constitute not only no use or value to the project, but they are the greatest possible nuisance, handicap, and hindrance to development and progress. This blemish of the reclamation act must be eliminated, controlled, or abated before any successful system of land settlement in the arid states can be carried out by the states or general government.

This condemnation of the speculator is fully warranted by the facts disclosed to this board. Wealthy investors have been unbelievably selfish. They have endeavored to have payments of the cost of canals reduced and thus repudiate the obligations entered into with the government. They have made the task of administration exceedingly troublesome; they have imposed on the Secretary of the Interior and his assistants a burden that would have been entirely averted if no one but actual cultivators and owners of small farms had been able to own the land. The use of public money to increase the productive value of privately owned land is good policy if the result is a public benefit rather than a private profit. Every precaution should be taken to insure this. If the benefits go to land speculators, if actual cultivators have to pay inflated prices, then such increase in wealth may be diverted into the wrong pockets and become an economic evil. To prevent this, interest should be paid on all money spent. Nonresident ownership and tenantry should be made impossible. The land so improved should be owned by its cultivators.

There is only one certain way of securing the latter result and that is through the purchase of all privately owned land owned by any individual, above a maximum farm unit, and its subdivision and settlement by the government. Efforts to secure a satisfac-

tory subdivision by private owners have all failed, both here and elsewhere. The present statutes to accomplish this result in this country are notoriously evaded. The people administering the Reclamation Act have been the unwilling but helpless tools of speculators. In Australia the land is not only acquired for subdivision by the government but there is a growing tendency toward its permanent nationalization. In New South Wales the settler's title is a permanent right to use. This right is inherited, but when the holder of the right ceases to live on the farm the title reverts to the state. In Victoria every closer settlement title has a condition that the owner or some member of his family must cultivate the land and live on it eight months of each year. Non-resident ownership and tenantry are impossible. The results are satisfactory. These conditions make for economic equality; they strengthen the social conscience; they create a civic pride in community life and make of agriculture something besides a gamble in land values.

The need for drastic action is also shown by the rapid growth of tenantry on American projects. On the Uncompahgre project, out of 910 farms, 359, or nearly 39 per cent, are farmed by tenants. On the Carlsbad project, out of 345 farms, 200 are cultivated by tenants. On the Shoshone, the Minidoka, and Boise projects the percentage of tenantry is altogether too high, and on all projects it is growing.

The prevention of land aggregation and tenantry is not permanently secured in the California Land Settlement Act, not because the friends of the measure did not believe it desirable, but because the step being taken was so great an advance over anything hitherto attempted in America that it was not deemed expedient to impose restrictions which might defeat the entire measure. It is confidently felt, however, that the act will be amended in the near future so as to make the ownership of land by its cultivators a permanent condition.

Federal and State Governments Should Coöperate in This Development

Thus far the federal government has provided all the money spent on reclamation projects and has assumed all the risks. This should not continue; the states in which reclamation work is carried out should share both in the direction of settlers and in the financial responsibility for the expenditure. The participation

of the state will be of great aid to the federal authorities because it will correct a mistaken idea which prevails that anything that the state can secure from the federal treasury is clear gain; which idea causes a tolerant opinion of steps to repudiate obligations. This would not exist if the losses of such repudiation fell in part on the state.

There is another, and even more important, reason for this coöperation. The state has a greater interest than the United States in the kind of communities created by these projects. It has to educate the children in these settlements; it is the main gainer from increased production, taxation, and trade. It ought, therefore, to have an important part in shaping the agricultural, the economic organization, and the civic ideals of these communities; and the time to begin this is at the inception of development.

The Australian plan should be adopted here. Under it the federal government lends the states money with which to buy, improve, and settle the land, and makes the state responsible for the return of this money and for the payment of money spent on irrigation works. The federal government charges the state 4 per cent for the money advanced and the state charges the settler 5 per cent. Under such an arrangement the carrying out of reclamation projects would involve both federal and state legislation and the creation of coöperative organizations, the federal government to be supreme in matters of construction and management of works, the state in the selection of projects, purchase and settlement of land, and the development of agricultural and economic institutions of the project. In this way each coöperator would perform the part it is best fitted to perform. Such state action has not been attempted in this country, but the California Land Settlement Act shows how it can be done. The last legislature of Wyoming favored such coöperation in the future reclamation of irrigable public land in that state. A memorial to Congress, passed unanimously by the state legislature, contained the following recommendations:

That the federal government construct and operate the irrigation systems under the provisions of the United States Reclamation Act.

That the state direct the subdivision, sale, and settlement of the land, inaugurating a system of financial aid and practical advice to the settlers, including loans for essential farm improvements at low rates of interest with long-time amortized repayments.

That the whole development be planned in advance so as to insure everything required for complete and harmonious community life; in-

cluding the provisions of homes for farm laborers, farm units of varying sizes, and plans for towns, roads, and schools.

The time has come when our negative, irresponsible treatment of land settlement should end. There ought to be created at an early date a competent land commission, composed in part of state and in part of federal authorities, to investigate this problem and make recommendations for a new land policy.